Virginia

Science and Engineering Profile

Characteristic	State	U.S.	Rank	Characteristic	State	U.S.	Rank
Doctoral scientists, 1999[1]	15,770	518,670	10	Total R&D performance, 1998 (millions)	$4,934	$214,668	12
Doctoral engineers, 1999[1]	3,190	107,100	11	Industry R&D, 1998 (millions)	$2,707	$163,480	16
S&E doctorates awarded, 1999[1]	647	25,953	13	Academic R&D, 1998 (millions)	$483	$25,342	17
of which, in engineering	24%	21%		of which, in life sciences	52%	57%	
in life sciences	21%	25%		in engineering	18%	16%	
in social sciences	16%	16%		in environmental sciences	12%	6%	
S&E postdoctorates, 1998[1]				Public higher education current-fund			
in doctorate-granting institutions	688	39,494	17	expenditures, 1997 (millions)	$3,805	$125,236	9
S&E graduate students, 1998[1]				Number of SBIR awards, 1990-98	1,952	35,413	3
in doctorate-granting institutions	12,958	422,834	10	Patents issued to state residents, 1999	1,043	83,901	23
Population, 1999 (thousands)	6,873	276,580	12	Gross state product, 1998 (billions)	$231	$8,800	13
Civilian labor force, 1999 (thousands)	3,522	140,536	12	of which, agriculture	1%	1%	
				manufacturing, mining, construction	19%	22%	
Personal income per capita, 1999	$29,789	$28,542	15	transportation, communication, utilities	9%	9%	
				wholesale and retail trade	14%	16%	
Federal spending				finance, insurance, real estate	18%	19%	
Total expenditures, 1999 (millions)	$57,842	$1,508,933	6	services	22%	21%	
R&D obligations, 1998 (millions)	$4,668	$70,445	4	government	18%	12%	

NOTE: Rankings and totals are based on data for the 50 States, District of Columbia, and Puerto Rico. Reliability of the estimates of industry R&D and of doctoral scientists and engineers varies by State, because the sample allocation was not based on geography. The rankings do not take into account the margin of error of estimates from sample surveys.

[1]Data on graduate students, doctoral scientists and engineers, and postdoctorates include all graduate degree (except M.D.) candidates and recipients in S&E fields, including health fields. Data on S&E doctorates awarded do not include health fields.

Federal Obligations for Research and Development by Agency and Performer: Fiscal Year 1998

Agency	Performer							
	Total	Federal Intramural	All FFRDCs	Industrial firms	Universities & colleges	Other nonprofits	State & local government	State rank, total
	[In thousands of dollars]							
Total, all agencies	4,667,864	1,480,464	198,506	2,694,070	244,283	43,793	6,748	4
Department of Agriculture	9,580	801	0	0	7,917	862	0	38
Department of Commerce	13,022	4,439	0	6,876	1,482	225	0	15
Department of Defense	3,677,347	1,140,801	128,251	2,352,621	46,186	9,488	0	3
Department of Energy	86,785	12,254	61,745	3,664	8,398	724	0	16
Dept. of Health & Human Services	167,903	4,201	546	27,618	121,857	12,657	1,024	20
Department of the Interior	43,493	41,904	0	580	891	46	72	2
Department of Transportation	30,455	264	4,894	18,599	2,310	1,200	3,188	4
Environmental Protection Agency	21,704	0	0	15,942	1,902	3,860	0	6
National Aeronautics and Space Admin	557,914	271,050	2,972	248,826	21,057	11,545	2,464	4
National Science Foundation	59,661	4,750	98	19,344	32,283	3,186	0	13
State rank, total	4	4	7	5	18	14	10	na

NOTE: Federal R&D obligations are as reported by funding agencies. Ranks and totals are based on data for the 50 States, District of Columbia, and Puerto Rico.

KEY: FFRDC = federally funded research and development center; SBIR = small business innovation research; na = not applicable.

SOURCES: Prepared by the National Science Foundation/Division of Science Resources Studies. Data compiled from numerous sources -- see the section, "Data Sources for Science and Engineering (S&E) State Profiles".